A2.2 Cell structure (HL)

What the Cell · DP Biology · note-taking sheet · HL statements A2.2.12–14

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 82–87) where you want more detail.

Guiding questions. What do all cells share, and how do they differ? How do we use microscopes to study cell structure?

A2.2.12 Endosymbiosis

Draw the steps by which a mitochondrion and then a chloroplast arose. Label the host and each engulfed cell.

Evidence	How it supports the theory
Ribosomes	
DNA	
Reproduction	
Membranes	
Gene sequences	

A2.2.13 Differentiation

Why do all cells in an organism have the same genome? What changes during differentiation, and what triggers it?

Genome and proteome: the difference, with one example of a specialized cell.

A2.2.14 Multicellularity

Evidence that multicellularity evolved many times. Two advantages, and two things cells must be able to do to live together.

What Volvox and choanoflagellates suggest about how multicellularity arose:

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

- ☐ Host cell
- ☐ Mitochondria first
- ☐ Chloroplasts
- ☐ 70S ribosomes
- ☐ Circular DNA
- ☐ Double membrane
- ☐ Gene expression
- ☐ Proteome
- ☐ Division of labour
- ☐ Independent origins
- ☐ Volvox
- ☐ Choanoflagellates